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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,540	07/02/2003	Mark Norris	00025-16611	4524

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EXAMINER

TUGBANG, ANTHONY D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 09/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/613,540

Applicant(s)

NORRIS ET AL.

Examiner

A. Dexter Tugbang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-37 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1, 12 through 23, 28 and 29, drawn to a process of making a parametric speaker transducer, classified in class 29, subclass 594.
  - II. Claims 2 through 7 and 24 through 27, drawn to a process of emitting waves, classified in class 29, subclass 25.35.
  - III. Claims 30 through 35, drawn to process of forming protuberances in piezoelectric material, classified in class 29, subclass 421.1.
  - IV. Claim 36, drawn to a process of making an emitter with a closed-end cavity and in a vacuum, classified in class 156, subclass 285.
  - V. Claim 37, drawn to a process of making an emitter with a back cover, classified in class 29, subclass 896.2.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Group I and Groups II through V are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination (Group I) as claimed does not require the particulars of each of the subcombinations as claimed because Group I does not require the particulars of:

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- 1) positioning a piezoelectric film over closed-end cavities with a rigid support member and applying an electrical signal input to the piezoelectric film to propagate to a desired compression wave (as required by Group II);
- 2) forming protuberances in the piezoelectric material (as required by Group III);
- 3) providing a piezoelectric film with a first conductive side and a second conductive side (as required in each of Groups IV and V).

The subcombinations, e.g. Groups II through V, each have separate utility, by themselves as noted in the examples above.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.
4. Inventions of Groups II through V are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in

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scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, each subcombination, e.g. either one of Groups II through V, has separate utility.

Group II requires positioning a piezoelectric film over closed-end cavities with a rigid support member and applying an electrical signal input to the piezoelectric film to propagate to a desired compression wave, not required in each of Groups III through V.

Group III requires forming protuberances in the piezoelectric material, which is not required in each of Groups II, IV and V.

Group IV requires providing an emitter substructure having a closed-end cavity, placing the emitter substructure in a vacuum chamber and evacuating air from the vacuum chamber, which is not required in each of Groups II, III and V.

Group V requires positioning a back cover against the inner face of the emitter plate, which is not required in Groups I through V.

See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

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5. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

6. If applicant(s) elect the invention of Group I, then this application contains claims directed to the following patentably distinct species: I-A through I-K. The species are independent or distinct within Group I because:

Species I-A, Claim 12, requires a cavity with a circular configuration;

Species I-B, Claim 13, requires a cavity with an elliptical configuration;

Species I-C, Claim 14, requires a cavity with an elongated slot;

Species I-D, Claim 15, requires a cavity with a serpentine configuration;

Species I-E, Claim 16, requires a cavity in a spiral configuration;

Species I-F, Claim 17, requires a cavity as a plurality of cavities with a concentric configurations of rings;

Species I-G, Claims 18 and 19, requires applying an ultrasonic parametric signal of decoupling;

Species I-H, Claims 20 through 22, requires positioning a piezoelectric film over opposing closed-end cavities;

Species I-I, Claim 23, requires sealing the piezoelectric film to one outer face of the support member,

Species I-J, Claim 28, requires forming the closed-end cavity as a depression within, but not through the support member,

Species I-K, Claim 29, requires forming the closed-end cavity as a combination of one aperture through the support member to a closed plenum chamber.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species within the invention of Group I, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claim 1 is generic in the invention of Group I.

7. If applicant(s) elect the invention of Group II, then this application contains claims directed to the following patentably distinct species: II-A through II-D. The species are independent or distinct within Group II because:

Species II-A, Claims 3 through 7 and 9 through 11, requires sealing the piezoelectric film;

Species II-B, Claim 24, requires heating the piezoelectric film;

Species II-C, Claims 25 and 26, requires applying an electrical signal as part of a parametric sound emitter; and

Species II-D, Claim 27, requires directing the output of the emitter with low frequency emissions directly at an individual.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species within the invention of Group II, for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, Claims 2 and 8 are generic in the invention of Group II.

8. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable

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thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

9. Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the



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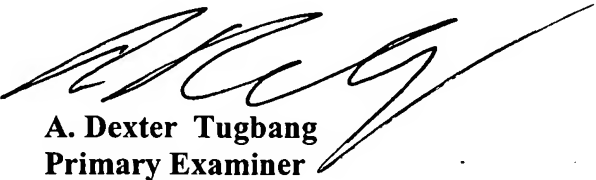
application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 571-272-4570.

The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

September 25, 2006